

**B 1000 Series
On-Line
Data Entry System
(ODESY)**

TERMINAL OPERATOR'S MANUAL

(REPLACES FORM 2011763)

PRICED ITEM

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PRICED ITEM

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INTRODUCTION

The B 1000 Series On-Line Data Entry System (ODESY) is a modern, sophisticated data entry and verification system that is easy to learn and operate. No previous data processing experience is needed to use ODESY.

ODESY is designed so that you can perform your normal business-day activities on-line. This means that your work is done at a terminal using a keyboard which allows you to communicate with the computer. A set of ODESY instructions called the Edit Program controls entering, verifying, and scheduling data for further processing. You use a set of special key words called commands to tell ODESY what you want to do. This manual explains how to use ODESY to perform your daily work activities.

Section 1 provides a general description of ODESY - what it does and how it makes your job easier. Section 2 tells you how to use a terminal, while Section 3 describes the basic operations you need to know to work with ODESY.

Sections 4 thru 6 provide instructions for entering, verifying, and scheduling data for further processing. Section 7 is a worked example which illustrates the basic steps involved in the ODESY data preparation process.

Appendix A tells you how and when to use the Edit Program commands. Messages that appear on the terminal screen are listed and explained in Appendix B. Appendix C is a glossary of terms related to computer systems in general and ODESY in particular.

A chart summarizing ODESY data preparation steps is included, along with a listing of Edit Program commands. Both of these pages can be removed for quick reference use at the terminal.

In addition, a table of contents and index are provided to help you locate the information you need as quickly as possible.

ODESY is available for use with B 1000 DE 2. For additional information about ODESY, refer to:

- a. B 1000 Series On-Line Data Entry System (ODESY) Capabilities Manual.
- b. B 1000 Series On-Line Data Entry System (ODESY) Installation Manual.
- c. B1000 Systems System Software Operation Guide, form 1108982.

- d. TD 700/TD 800 Equipment Reference Manual,
form 1068699.
- e. TD 730/TD 830 Systems Reference Manual, form 1093788.

SECTION 1. ODESYS OVERVIEW

ODESY is designed to make data entry faster, easier, and more accurate by using multiple on-line terminals. Since terminals can be placed in the departments where data originates, a separate data preparation department is not needed. Data entry is automatically faster and more accurate because you who are most familiar with the meaning of the data are entering it.

Data entry using conventional methods can be a tedious process because of the time needed to transfer, check, correct, update, and process information. ODESYS makes your job easier and more interesting by giving you computerized control over data entry activities.

Data entry with ODESYS usually involves transferring information from a source document, such as a printed form, to a similar form ODESYS displays on the terminal screen. The screen format tells you what information to enter and where to enter it. ODESYS helps detect errors as they occur by performing a wide range of checks on the data as it is entered. If errors are found, the information is returned for immediate correction. ODESYS also stores data for you in the order it is entered.

After data is entered, there is an optional verification phase. During verification, rekeyed and/or displayed data is compared with the original information entered. ODESYS again performs a series of checks on the data and returns it for correction, if necessary.

Updating information simply involves telling ODESYS what you want to change and the type of change you want to make (add, modify, or remove data). Stored information can be updated during data entry or verification.

Because you are working on-line, stored data is always readily available. ODESYS allows you to inspect stored information at any time during your work session. ODESYS also provides you with work session status information upon request.

You can also use ODESYS to schedule entered and verified data for further processing. This is the last step in the data cycle, since a supervisor usually oversees the actual processing.

ODESYS helps you during every phase of the data preparation process. Entering, checking, correcting, updating, and processing information are all made faster and easier by using ODESYS.

SECTION 2. TERMINAL DESCRIPTION

The terminal is the device you use to communicate with the computer. A computer terminal consists of a cathode ray tube (CRT) and a keyboard.

LOGICAL STATION NUMBER

Each terminal is uniquely identified by a logical station number (LSN). LSNs are used with all commands which refer to a particular station. The WRU command can be used to obtain your station's LSN (refer to Appendix A). The LSN of the ODT (operator display terminal) is zero.

CATHODE RAY TUBE (CRT)

The cathode ray tube (CRT) resembles a television screen and displays information being transmitted to or received from the computer. When you key in data (type on the keyboard), the characters are automatically displayed on the CRT.

SCREEN FORMATS

Screen formats resemble forms and are displayed on the CRT to guide you during data entry and verification. These formats contain specific areas where you enter data. After data is entered, you transmit the screen format to the computer for processing. Guiding and warning messages appear on the CRT when necessary. Instructions for entering and verifying data are contained in Sections 4 and 5.

CURSOR

The cursor is a small, rectangular image of light that indicates where to type the next character of data. You control the position of the cursor by using various keyboard function keys (refer to FUNCTION KEYS in this section).

The first position on the screen, the upper left-hand corner, is called the HOME position for the cursor. During data entry, the HOME position is the first entry field (i.e., the cursor parking area). The cursor must be in HOME position before entering a command. Pressing the unshifted CLEAR/HOME key moves the cursor to the HOME position.

CHARACTERS

A character is any number, letter, or special symbol on the keyboard. Letters are called alpha characters, numbers are called numeric characters or digits, and together they are called alphanumeric characters.

FIELDS

A field is a fixed area on a screen format used to contain specific information. Most fields are labeled with a heading which indicates the type of information displayed or the type of information to be entered.

Fields are bounded by delimiters which indicate field limits. Delimiters appear as triangles (► ◄), braces ({ }), or square brackets ([]), depending on the type of terminal you are using.

Entry and Nonentry Fields

There are two types of fields on the screen formats: entry and nonentry. Entry fields are the only areas where information can be entered and/or changed. These fields are enclosed by delimiters.

Nonentry fields contain system-supplied information; you cannot enter or change data in these fields. Nonentry fields are used for titles, field headings, etc.

Left Justified Entry Fields

Most of the fields on the screen formats are left justified. This means that the cursor moves in a left-to-right direction as characters are entered. When the field is filled, the cursor automatically moves to the next entry field. If the field is not filled, you must use a function key to move the cursor (refer to FUNCTION KEYS in this section).

Right Justified Entry Fields

Some entry fields on the screen formats are right justified. When the cursor moves to a right justified field, it occupies the right-most field position and remains there while characters are entered. A character first appears at the cursor position and then moves left as additional characters are entered. When the field is filled, entering additional characters shifts the left-most characters out of the field. To move the cursor out of a right-justified field, use a function key (refer to FUNCTION KEYS in this section).

Cursor Parking Area

The cursor parking area is an entry field on a screen format. The cursor automatically enters this space during data entry when the last field of the screen format is filled. You can move the cursor to the cursor parking area by pressing the unshifted CLEAR/HOME key.

KEYBOARD OPERATION

The keyboard of a terminal is similar to a typewriter keyboard. It contains letters, numbers, special characters, and special function keys which are used to type on the screen. In addition, the keyboard contains indicator lights to indicate what mode (method of operation) the terminal is in. The keys and lights on a terminal keyboard are grouped into:

- a. Function keys.
- b. Control keys and indicator lights.
- c. Alphanumeric and special character keys.

FUNCTION KEYS

Function keys move the cursor on the screen. All function keys except the CHAR INS key repeat the function when held down. CLEAR/HOME, RTAB, SKIP/TAB, and RET are the only function keys that move the cursor to an entry field. The function keys used in ODESYS are:

- a. CLEAR/HOME.
- b. RTAB.
- c. SKIP/TAB.
- d. EOP/CLR/EOL.
- e. CHAR INS.
- f. REVERSE LINE FEED (↑).
- g. BACKSPACE (←).
- h. FORWARD SPACE (→).
- i. LINE FEED (↓).
- j. CHAR DEL.
- k. RET.

CLEAR HOME (CLEAR/HOME)

The CLEAR/HOME key functions in a shifted and unshifted position.

UNSHIFTED POSITION - Returns the cursor to HOME position.

SHIFTED POSITION - Clears all data within entry fields from the position of the cursor to the end of the screen.

REVERSE TAB (RTAB)

The RTAB key moves the cursor to the preceding entry field. When the cursor is in the top-left-most entry field, pressing RTAB moves it to the bottom-right-most entry field.

SKIP/TAB

This key moves the cursor to the next entry field in a left-to-right direction.

END-OF-PAGE/CLEAR/END-OF-LINE (EOP/CLR/EOL)

The EOP/CLR/EOL key functions in a shifted and unshifted position.

UNSHIFTED POSITION - Clears all data within an entry field from the location of the cursor to the end of the field.

SHIFTED POSITION - Clears all data within entry fields from the location of the cursor to the end of the screen.

CHARACTER INSERT (CHAR INS)

The CHAR INS key performs two functions: single or multiple character insertion.

SINGLE CHARACTER INSERTION - This key must be pressed twice to obtain a space at the position of the cursor. The character on which the cursor is located, and all other characters within an entry field (or on a line), are shifted one space to the right.

MULTIPLE CHARACTER INSERTION - Press the CHAR INS key only once. The beginning space is created, and all remaining characters within an entry field (or on a line) are continually shifted to the right as you type. Characters which are shifted out of an entry field (or off the end of a line) are lost. To stop the continual shifting of characters, press the CHAR INS key again before the last character to be inserted is typed.

REVERSE LINE FEED (↑)

The reverse line feed key moves the cursor up from line to line. When the cursor is in the top line, this key moves it to the same position in the bottom line. This key should not be used during data entry.

BACKSPACE (←)

The backspace key moves the cursor one position back. When the cursor is at the left edge of a line, this key moves it to the right edge of the line above. When the cursor is in HOME position, it is moved to the end of the last line on the page.

This key should not be used to move the cursor from one entry field to another.

FORWARD SPACE (→)

The forward space key moves the cursor one space forward. When the cursor is at the right edge of a line, this key moves it to the first position on the line below. This key should not be used to move the cursor from one entry field to another.

LINE FEED (↓)

The line feed key moves the cursor down from line to line. When the cursor is in the bottom line, this key moves it to the top line. This key should not be used during data entry.

CHARACTER DELETE (CHAR DEL)

The CHAR DEL key removes the character within the cursor by shifting the following characters on the line one space to the left. Holding the key down causes continual removal of characters on the line.

RETURN (RET)

The RET key moves the cursor from any position in a line to the first (left-most) entry position of the next entry line. If the cursor is in the last line, RET moves the cursor to the HOME position.

CONTROL KEYS AND INDICATOR LIGHTS

The control keys are the five blue keys located on the upper part of the keyboard. These keys allow you to select the mode of operation of a terminal. Since the computer automatically places the terminal in the correct mode, you should only use these keys to transmit data and to receive a delayed message.

The indicator lights, located above the control keys, indicate the current operating mode of the terminal.

The control keys and indicator lights are:

- a. XMT (Transmit).
- b. RCV (Receive).
- c. LOCAL.
- d. SPCFY (Specify).
- e. FORMS.
- f. CTRL (Control).
- g. ENQ (Enquiry).
- h. ERROR.
- i. LTAI (Line Terminal Activity Indicator).

TRANSMIT KEY (XMT)/TRANSMIT MODE INDICATOR

The XMT key sends the contents of the screen to the computer for processing. The XMT indicator lights briefly and then goes out when transmission is complete. If the XMT light stays on longer than 15 to 20 seconds, the system is probably unable to accept the message. This situation should be reported to a supervisor.

RECEIVE KEY (RCV)/RECEIVE MODE INDICATOR

The RCV key places the terminal in the Receive mode and lights the RCV indicator. This means that the terminal is ready to receive data. The terminal normally enters Receive mode after the XMT key is pressed and the message is transmitted.

LOCAL KEY (LOCAL)/LOCAL MODE INDICATOR

The LOCAL key places the terminal in Local mode and lights the LOCAL indicator. The terminal automatically enters Local mode when information is entered. The terminal cannot receive messages while in Local mode. If a message is sent to the terminal, the ENQ indicator lights and an alarm sounds until the terminal is taken out of Local mode by pressing the RCV key.

SPECIFY KEY (SPCFY)

This key is not used with ODESYS.

FORMS MODE INDICATOR

This light indicates that the terminal is in Forms mode, which is the normal mode for data entry. ODESYS controls the transition between Forms mode and normal mode.

CONTROL KEY (CTRL)/CONTROL MODE INDICATOR

This key is not used with ODESYS.

ENQUIRY INDICATOR (ENQ)

The ENQ indicator lights whenever the central processor attempts to send a message to the terminal. To further alert you, an audible alarm sounds when the ENQ indicator lights. To receive the message and turn off the alarm, depress the RCV key. The volume of the alarm on the TD 700/800/820 can be adjusted by using the volume control.

ERROR INDICATOR (ERROR)

If the Error indicator lights, inform a supervisor. This light indicates that the terminal has detected an internal error (not an operator error) and is presently incapable of operating.

LINE TERMINAL ACTIVITY INDICATOR (LTAI)

In most cases, the LTAI light is on and blinking during normal operation. An LTAI light that remains constantly on or off indicates a problem, and a supervisor should be notified.

SECTION 3. TERMINAL OPERATION

To acquaint you with the basic terminal operations you need to know to work with ODESYS, this section explains how to log in and out of the system, and how to enter, correct, and transmit data.

LOGGING IN AND OUT

A work session on the terminal begins with logging in and ends with logging out. An operator number and password are needed to log in. These are assigned by a supervisor.

To begin a session:

Turn the ON/OFF switch on. The ON/OFF switch may be found:

- 1) TD 700 - On the back of the terminal.
- 2) TD 730 - Right-hand side of the terminal.
- 3) TD 800/820/830 - Just below the screen.

When the terminal is switched on, it should be in Local mode. If the Local light is out, press the LOCAL key.

Screen brightness can be adjusted on all terminals except the TD 730 by using the brightness control.

When using a TD 730/830, it is advisable to perform a confidence test to ensure that the terminal is ready for an ODESYS session. To do this, press CTRL space D CTRL. Six asterisks (*) should appear in front of the cursor when the test is finished.

Enter: /HELLO <your operator number> <your password>
Press: XMT

To end a session:

Enter: /BYE
Press: XMT

ENTERING DATA

Data is entered to the system by typing from the keyboard. There are certain features, discussed below, which are provided to make data entry more efficient.

DEFAULT ENTRY FIELDS

When a screen format is designed, some fields may be supplied with commonly used data so that you do not have to enter this information each time. Therefore, when the screen format is displayed, these fields are already filled. You can tab over these fields if they are correct, or enter new data if the supplied values are incorrect.

TABBING THROUGH FIELDS

To move the cursor quickly through a number of fields without deleting any information, use any of the following keys:

- a. SKIP/TAB.
- b. RTAB.
- c. RET.

Refer to Section 1 for a complete explanation of these keys.

CORRECTING DATA BEFORE TRANSMITTING

If you make an error before transmitting entered data, you can correct the error in one of the following ways:

- a. Delete unwanted characters - Use the CHAR DEL key. (Refer to Section 2 for a detailed description of this key.)
- b. Insert characters - Insert needed characters by using the CHAR INS key. (Refer to Section 2 for a detailed explanation of this key.)
- c. Type in correct data - Either use the space bar to clear the field and then enter correct data, or type over the incorrect data. When using this method, be sure to delete any old data which extends beyond newly entered information.

To correct data that has been entered and transmitted, you must use a different method. This process is explained in Sections 4 and 5.

TRANSMITTING DATA

There are two types of data that you transmit to the computer: screen formats and commands. Each type of information is transmitted differently, as explained on the following page.

TRANSMITTING A SCREEN FORMAT

When all necessary fields on a screen format are filled, move the cursor past all the data to be transmitted and press the XMT key. If the last field on the screen format is filled, the cursor should be in the cursor parking area before pressing the XMT key.

ODESY checks the transmitted information and returns the screen format for correction, if necessary. If no errors are present, the next screen format in the sequence is displayed, and data entry can continue.

TRANSMITTING COMMANDS

Commands are key words which tell ODESY what you want to do. Commands should be entered from the HOME position. It is only necessary to enter the first three letters of a command, but the command must be preceded by a slash (/) to indicate to ODESY that it is a command and not ordinary data. After the command is entered from the HOME position, press the XMT key. Commands that you use with ODESY are summarized in Appendix A.

SECTION 4. DATA ENTRY

Data entry using ODESYS involves transferring information from its original form, such as an invoice, to a screen format that is displayed on the CRT. You use the terminal keyboard to key in (type in) the information. The screen format is usually designed by a supervisor and generally resembles the original document as closely as possible.

Each collection of formats has a group name which identifies the application program that processes the data you enter. For example, if you are entering invoice data, the group name might be INVC. You use the group name when specifying the set of formats you need to begin data entry.

The set of information that you transfer to a screen format is called a record. A record is a collection of related information treated as a unit. A purchase order, invoice, and time card are all examples of a record. A screen format can contain one or more records. For storing and processing convenience, records are grouped together to form a batch. You key in a batch of data, one record at a time, using screen formats. Each batch is identified by a number that is assigned by a supervisor or by ODESYS.

ODESYS performs audit checks on the data as it is entered to detect certain types of errors. For example, numeric fields can be checked to ensure that only numbers are entered. If audit check errors are found, the fields in error are indicated, and the record is redisplayed for correction. You can correct errors at this point or force the incorrect data to be accepted for correction at a later time.

You may also choose to check data by performing verification. Verification involves comparing rekeyed or displayed data, character by character, with the original data entered. Verification is discussed in Section 5.

Entering data with ODESYS consists of a series of activities, performed using commands, which allow you to enter, display, add, remove, and change data. The commands used are discussed throughout this section and are summarized in Appendix A.

Activities performed during data entry are:

- a. Opening a batch.
- b. Entering data.
- c. Correcting errors that occur during data entry.
- d. Forcing acceptance of a record (optional). ~~X~~ ←
- e. Displaying a record (optional).
- f. Changing an existing record (optional).
- g. Adding a record (optional).
- h. Removing a record (optional).
- i. Closing a batch.

These activities are performed in the order listed. The optional activities can be performed any time after a batch is opened. Each function is discussed in the following paragraphs.

OPENING A BATCH

Before you can perform any data entry activity, you must first open a batch. When you open a batch specifically for data entry, you are working in the Enter mode. This means that you are only allowed to use certain commands to perform activities associated with entering data.

When opening a new batch, you can specify a batch number or have ODESYS assign one. The group name must be supplied since it identifies the application program that processes the data contained in the batch (i.e., payroll, invoicing, inventory, etc.). Therefore, an ODESYS batch must contain data intended for processing by only one application program.

When opening an existing batch, only the batch number must be specified.

To open a new batch, enter and transmit:

/OPEN ENTER <group name>

or

/OPEN <batch number> ENTER <group name>

(If <batch number> is omitted, ODESYS assigns a number.)

To open an existing batch, enter and transmit:

/OPEN <batch number> (ENTER)

When a batch is opened, ODESYS marks it as in use by this operator at this station. This prevents two operators from making changes to the same batch at the same time.

ENTERING DATA

After opening a batch, you must request the format you need to enter data. It is not necessary, however, to specify a record number, since ODESYS always begins with the first available record. If the batch is an existing batch, data entry begins at the record following the last record in the batch. For example, if a batch contains 120 records, ODESYS begins with record 121 for data entry. If the batch is new (just opened), ODESYS begins with record number one.

To begin data entry at the first available record:

Enter and transmit: `//<format name>`

ODESYS responds by displaying the requested format. You can now enter and transmit data. If default information is displayed, you can tab over it or enter other data. During data entry, the control information at the top of the screen format tells you the current batch number, the current record, the format name, and the name of the next format.

ODESYS does not check the data until an entire record is entered and transmitted. If there are no errors in the data, ODESYS displays the format for the next record to be entered.

If errors are found, the format and data are returned to the screen for correction. Correcting data entry errors is discussed on pages 18 thru 19.

CHANGING AND ENDING FORMAT SEQUENCE

Formats are automatically displayed in sequence, but the sequence can be changed or ended.

To change the format sequence when the next format is not the one desired:

After data has been entered for the format displayed, change the name currently in the NEXT FORMAT field to the name of the format you want. Transmit the screen format.

To change the format sequence when the format displayed is not the one desired:

Press the unshifted CLEAR/HOME key.
Enter and transmit: `//<format name>`

To end the format sequence:

After data has been entered for the format displayed, enter blanks (using the space bar) in the NEXT FORMAT field. Transmit the screen format.

ENTERING BATCH TOTALS

Batch totalling is an optional feature which helps ensure that numbers have been entered accurately in the records in a batch. When batch totalling is used, the numbers entered in a numeric field of each record can be added and then compared with an ODESYS-calculated total. For example, a calculator may be used to add the numbers entered in the VALUE field of each record in a batch of invoice data. This total is entered into a batch header record. The batch header format is requested just as you would request any format for data entry. Selected fields on a record can be included for batch totalling.

When a batch is scheduled for extraction, ODESYS performs the same calculations and compares its total(s) with the total(s) you calculated and entered. If any differences are found, a batch total comparison error results. Correcting this type of error is discussed in Section 6.

You can also compare batch totals by using the DISPLAY and STATUS commands (refer to Appendix A). Errors should be corrected before scheduling the batch.

OBTAINING BATCH AND STATION STATUS REPORTS

You can obtain batch status and station status reports any time you are working with ODESYS by using the STATUS command. These reports give you such information as batch number, data entry status (batch status report), and current record number, current mode, and current group (station status report). Refer to Appendix A for a detailed explanation of this command.

CORRECTING DATA ENTRY ERRORS

There are two types of errors that are checked for during data entry: audit check errors and crossfoot errors. Each of these types of errors is discussed below.

CORRECTING AUDIT CHECK ERRORS

Each time data is entered and transmitted, ODESYS performs audit checks on it. If an audit check error is made, an audible alarm sounds to attract your attention. On a TD 730, TD 820, or TD 830 the alarm sounds just once. On a TD 700 or TD 800, the alarm sounds repeatedly until the RCV key is pressed.

The record in error is displayed on the screen, and the error count in the control line indicates the total number of audit check errors. The fields in error are also shown. On a TD 730 or TD 830, a field in error is highlighted with blink video. On a TD 700, TD 800, or TD 820 errors are indicated by overwriting the whole field with question marks. ODESYS also moves the cursor to the first field in error.

When errors are indicated, you should correct them and transmit the screen. ODESYS then displays the next record format so that data entry can continue.

CORRECTING CROSSFOOT ERRORS

Crossfooting is an optional feature that ensures that numbers have been entered and totalled correctly within a record. For example, ODESYS can check an employee's time card record to ensure that the numbers entered for hours worked per day add up to the number entered for total hours worked. A crossfoot error occurs if the totals do not match. One or more of the daily figures could be in error and/or the weekly total could be incorrect.

Since ODESYS determines only that the totals do not match, there is no individual field to indicate as being in error. Instead, an X appears in the control line to alert you that there is a crossfoot error, and the cursor is placed in the first field of the format. You should correct the error immediately, if possible, or force the record to be accepted (discussed below). When the record has been corrected and transmitted, ODESYS displays the next record format for continued data entry.

FORCING ACCEPTANCE OF A RECORD

If there are errors in a record that cannot be corrected immediately, you can either omit the record and insert it later, or you can force the record into the batch. Errors can then be corrected at a later time.

To force acceptance of a record containing errors:

Enter and transmit: /ACCEPT

NOTE

If you force a record containing errors to be accepted, make a note to correct that record at a later time.

DISPLAYING A RECORD

A batch record can be inspected at any time. You can open a batch for display only (refer to Appendix A, OPEN command), or you can display a record while a batch is open for data entry, verification, or scheduling. You can display a specific record or page through a batch of records. The data displayed can be examined, but you cannot make any changes to it. DIS appears in the top line of the screen to indicate that you are displaying a record.

To display a specific record, enter and transmit:

/<record number>

To display the next record, transmit from the position of the cursor.

To page forward through a batch, enter and transmit:

/+<increment>

An increment of one is assumed if no increment is specified.

To continue paging forward by the same increment:

Transmit from the position of the cursor.

To page backward through a batch, enter and transmit:

/-<increment>

An increment of one is assumed if no increment is specified.

To continue paging backward by the same increment:

Transmit from the position of the cursor.

CORRECTING EXISTING RECORDS

It is often necessary to make corrections to a batch of data after it has been keyed in for the first time. You may want to correct existing records, add records, or remove records. Any of these changes can be made during data entry, and each is discussed in the following paragraphs.

MODIFYING A RECORD

A record can be changed during data entry or verification. If you do not normally verify records, or if you do not want to rekey the entire record in order to make minor changes, you can modify the record during data entry.

You can make changes to a batch record at any time during data entry. The record number specified for modification must be contained in the batch that is currently open.

To make changes to an existing record:

Enter and transmit: `//<record number>`

The data record specified is displayed, and any of the data it contains can be modified. MOD appears in the top line of the screen to indicate you are modifying a record. When changes are complete, transmit the record. ODESYS then checks the data and returns the record for correction, if necessary.

If there are no errors, the new data is accepted, and ODESYS displays the next record in the batch. If several consecutive records need changes, it is only necessary to request the first, since batch records are automatically displayed in sequence. The sequence can be broken by keying in another command.

ADDING A RECORD

If a record has been omitted, it can be added to the correct open batch at any time during data entry or verification. If the order of records in the batch is not important, you can add the record to the end of the batch.

If the records must be in a certain order, you can specify the location for the added record. The new record is inserted after the record number specified, and the numbers of all the following records are increased by one. For example, if a batch contains 50 records, and a new record is inserted after record 25, records 26 thru 50 are renumbered as 27 thru 51.

To add a record to the end of a batch, enter and transmit:

`//<format name>`

To add a record at a specific location, enter and transmit:

`/INSERT <record number> <format name>`

ODESYS responds by displaying the format requested. INS appears in the top line of the screen format to indicate you are inserting a record. Data to be added is entered in the format, transmitted, and checked for errors. If errors are found, the

record is returned for correction. The record is then placed in the specified location of the batch.

REMOVING A RECORD

An unwanted record can be removed from a batch at any time during data entry or verification. The record number specified for removal must be contained in the batch that is currently open.

When a record is removed, the record numbers of all following records are decreased by one. For example, if record 10 is deleted from a batch containing 15 records, then records 11 to 15 are renumbered as records 10 to 14.

To remove a record from a batch:

Enter and transmit: /DELETE <record number>

CLOSING A BATCH

When a batch is entered, you indicate that data entry is complete by closing the batch. Closing a batch makes it available to other operators for verification, correction, or scheduling.

To close a batch:

Enter and transmit: /CLOSE

SECTION 5. VERIFICATION

Verification is performed to ensure that the data in a batch is correct. Usually each record in a batch is rekeyed. ODESYS then compares what was previously entered with this data and reports any comparison errors. It is recommended that a batch be entered by one operator and verified by another in order to reduce the possibility of errors being repeated.

Verification is optional; you can verify all, some, or no data. Data can be scheduled for extraction without verification.

During verification, you use a set of commands that allow you to verify and change records. The commands used are discussed throughout this section and are summarized in Appendix A.

Activities performed during verification include:

- a. Opening a batch for verification.
- b. Requesting a record for verification.
- c. Verifying records.
- d. Correcting verification and audit check errors.
- e. Forcing acceptance of a record (optional).
- f. Adding a record (optional).
- g. Removing a record (optional).
- h. Closing a verified batch.

These activities should be performed in the order listed. The optional activities can be performed any time after a batch is opened for verification. Each function is discussed in the following paragraphs.

OPENING A BATCH FOR VERIFICATION

Before verification can begin, you must open the batch of records you want to verify. When a batch is opened specifically for verification, you are working in the Verify mode. This means that you can only use certain commands to perform verification activities.

To open a batch for verification:

Enter and transmit: /OPEN <batch number> VERIFY

ODESYS marks the opened batch as being in use by this operator at this station. This prevents two operators from making changes to the same batch at the same time.

REQUESTING A RECORD FOR VERIFICATION

After opening a batch, you request a record for verification. You can begin with record one, or request the first unverified record number. You do not have to specify the format name, since it was defined when the record was entered.

To request a record for verification:

Enter and transmit: //<record number>

ODESY displays the format of the requested record. VER appears in the top line of the screen to indicate that you are verifying data.

VERIFYING A RECORD

Verifying a record usually involves rekeying it. ODESY displays the blank format of the record requested. You then enter the same information that was keyed in during data entry. Some of the fields on the screen format may already be filled when displayed. These can be checked visually and do not have to be rekeyed. If you find errors in the information displayed, you can enter the correct data while rekeying the record. The cursor skips over any field that is designated as a No Verify field. Data cannot be changed in a No Verify field.

After the screen format is rekeyed and transmitted, ODESY performs two series of checks on the data. It compares the data character by character with the data keyed in during data entry and repeats the audit checks associated with the format. If there are no errors, ODESY marks the record as verified and displays the next record to be verified. This process continues until the end of the batch is reached, or until a new command is entered.

If errors are found, the format and data are redisplayed for correction.

CORRECTING VERIFICATION ERRORS

There are two types of errors that can occur during verification: audit check errors and verification errors. The error count displayed in the top line of the screen format is the number of audit check errors plus the number of characters which do not match (i.e., verification errors). Audit check errors are indicated and corrected in the same manner as during data entry (refer to pages 18 thru 19).

Verification errors result when ODESY finds differences between the rekeyed data and the data originally entered. Verification errors are indicated by overwriting the characters which do not match with question marks. There are two possible sources of

verification errors; either the original data is wrong, or the rekeyed data is wrong.

If the original data is incorrect, enter the rekeyed data again and transmit the record.

If the rekeyed data is incorrect, you must key in and transmit the correct data twice. This is because the incorrect rekeyed data is compared with whatever is entered next; therefore, there are comparison errors when the original data is entered the first time, even though it is correct.

The two methods of correcting verification errors are summarized as follows:

ORIGINAL DATA INCORRECT

Step	Action
1	Comparison error displayed. Original data incorrect.
2	Enter correct rekeyed data again. Transmit.
3	Record accepted.

REKEYED DATA INCORRECT

Step	Action
1	Comparison error displayed. Rekeyed data incorrect.
2	Enter correct data. Transmit.
3	Comparison error displayed.
4	Enter correct data again. Transmit.
5	Record accepted.

DISPLAYING, ADDING, AND REMOVING RECORDS

Records can be displayed, added, and removed during verification just as during data entry. Refer to page 20 (DISPLAYING A RECORD), page 21 (ADDING A RECORD), and page 22 (REMOVING A RECORD) for instructions.

CLOSING A VERIFIED BATCH

Verification normally continues until the whole batch is verified. You indicate that verification is over by closing the batch.

To close a verified batch:

Enter and transmit: /CLOSE

If ODESY finds unverified records when the batch is closed, the audible alarm sounds to attract your attention, and a message is displayed giving the number of the first unverified record. You can then re-open the batch and verify the remaining records, if necessary.

SECTION 6. SCHEDULING A BATCH FOR EXTRACTION AND DELETION

Extraction is the process of reorganizing the data you entered into a form suitable for processing by an application program. Deletion removes a batch permanently.

When a batch is complete and ready for processing by an application program, you can schedule the batch for extraction. Usually a batch is not deleted until you are sure that it has been properly processed. You should schedule the batch for extraction, and then schedule it for deletion after it has been successfully processed. Batches are not automatically deleted; they must be specifically scheduled for deletion.

Scheduling a batch is controlled by the Edit Program, the same program that controls data entry and verification. However, a batch is actually extracted or deleted only when the Extraction Program is run. When scheduling a batch, you are telling ODESYS that a batch is ready to be extracted or deleted; you are not actually extracting or deleting the batch.

Scheduling a batch consists of the following activities:

- a. Scheduling a batch for extraction.
- b. Scheduling a batch for deletion.
- c. Retrieving a batch (optional).

Each activity is discussed in the following paragraphs.

SCHEDULING A BATCH FOR EXTRACTION

When a batch is ready to be extracted, it must first be scheduled. The batch is not actually extracted until the Extraction Program is run.

To schedule a batch for extraction, enter and transmit:

```
/SCHEDULE <batch number>
```

If a batch number is not specified, the batch currently open is scheduled.

To schedule a range of batches for extraction, enter and transmit:

```
/SCHEDULE <batch number> <batch number>
```

The batches within the range specified are scheduled.

INSPECTING AND CORRECTING BATCH TOTALS

If the batch totalling feature is being used, ODESYS now compares its computed batch totals with the batch totals you entered. If there is a difference between the totals, a batch total comparison error results, and the batch is not scheduled.

To help you correct batch total comparison errors, you can inspect both the ODESYS-calculated batch totals and the totals you entered.

To inspect ODESYS-calculated totals:

Enter and transmit: /STATUS TOTALS

To inspect the batch totals you entered:

Enter and transmit: /<batch header record number>

SCHEDULING A BATCH WITH BATCH TOTAL COMPARISON ERRORS

A batch can be scheduled for extraction even though it contains batch total comparison errors.

To schedule a batch for extraction without correcting batch total comparison errors:

Enter and transmit: /SCHEDULE <batch number> OVERRIDE

SCHEDULING A BATCH FOR DELETION

Scheduling a batch for deletion tells ODESYS to remove a batch permanently the next time the Extraction Program is run. When a batch is scheduled for deletion, it is not removed until the Extraction Program is run.

NOTE

When a batch is deleted, it is permanently removed. It is not possible to retrieve a batch once it has been deleted.

To schedule a specific batch for deletion, enter and transmit:

/SCHEDULE <batch number> DELETE

If no batch number is specified, the current open batch is scheduled.

To schedule a range of batches for deletion, enter and transmit:

/SCHEDULE <batch number> <batch number> DELETE

The batches within the range specified are scheduled.

RETRIEVING A SCHEDULED BATCH

A batch can be retrieved from its scheduled extraction or deletion any time before the Extraction Program is run. Opening the batch removes it from the schedule. If a batch has to be opened after it is scheduled for extraction or deletion, it must be rescheduled when it is ready for extraction or deletion.

SECTION 7. BASIC WORKED ODESYS EXAMPLE

The example presented in this section contains the basic procedures involved during an ODESYS work session. Typical data entry, verification, and scheduling activities are included.

A batch of invoice data is used in this example. The group name is INVC, and there are two formats: BHDR, which is the batch header format, and RECL, which is used for data entry. The new batch consists of six records, including the batch header. The batch number is 1, the operator number is 1, and the operator password is SUP1.

LOGGING IN

After the Edit Program is started, you are ready to begin an ODESYS work session by logging in.

/HEL 1 SUP1 is entered and transmitted.

ODESYS replies: YOU ARE LOGGED IN

OPENING A BATCH FOR DATA ENTRY

When you are logged in, you can open a batch for data entry.

/OPE 1 ENT INVC is entered and transmitted.

ODESYS replies: BATCH OPENED

REQUESTING THE BATCH HEADER RECORD FORMAT

Since the batch totalling feature is being used, the batch header record is requested so that batch totals can be entered.

//BHDR is entered and transmitted.

ODESY replies by displaying the requested format:

```
001 0001 BHDR      [ ][REC1]
BATCH NO [      ]
BATCH TOT1 [      ]
BATCH TOT2 [      ]
```

The batch totals to be entered and transmitted are:

```
Batch Tot 1 = 152
Batch Tot 2 = 2460
```

When the batch totals are entered and transmitted, ODESY automatically displays the next format in the sequence.

ENTERING DATA

The format for entering invoice data is REC1. Since formats are automatically displayed in sequence, ODESY returns format REC1 after the batch header format is transmitted.

```
001 0002 REC1      [ ][REC1]
STK NO  [      ] ST CODE [05]
QTY  [      ] VALUE [      ]
DATE [      ]
```

The first line contains control information, such as the batch number (001), record number (0002), current format name (REC1), and the logical following format (also REC1). The unlabeled entry field in the first line is the cursor parking area.

The following data is to be entered into the appropriate fields for each of the five records. On this format, the ST CODE field is a default field. If the information supplied is correct, it can be tabbed over; if it is not, the correct information can be keyed in.

	STK NO	ST CODE	QTY	VALUE	DATE
Record 2	50001	5	3	300	070781
Record 3	50001	5	10	750	070781
Record 4	50003	5	27	810	073081
Record 5	50003	5	4	120	070981
Record 6	50003	5	8	480	071981

Each record is transmitted after the information has been entered. It is then checked for errors.

CORRECTING DATA ENTRY ERRORS

ODESY checks each record as it is transmitted. It finds two errors on record 4. VALUE and DATE were entered incorrectly.

Since there are errors, ODESY returns the record to the operator for correction, as shown below. If the terminal is a TD 730 or TD 830, the fields in error blink, as does the error count in the control line. Otherwise, the fields in error are filled with question marks. In addition, the audible alarm sounds to attract your attention.

```

001 0004 REC1 (02) [ ][REC1]
STK NO  [50003]  ST CODE [05]
QTY    [ 27]      VALUE [81a]
DATE   [073281]

```

The following corrections are made to the two fields in error:

```
001 0004 REC1      [ ] [REC1]
STK NO   [50003]   ST CODE [05]
QTY   [ 27]       VALUE  [ 810]
DATE [073081]
```

ODESY accepts the corrected data and sends the next format for entry of record 5.

Data entry continues until all six records are entered. The batch is closed when data entry is complete.

/CLOSE is entered and transmitted.

ODESY replies: THE BATCH IS NOW CLOSED

VERIFYING A BATCH

If verification is required, the batch must be re-opened for verification.

/OPE 1 VER is entered and transmitted.

ODESY replies: BATCH OPENED

The first record to be verified is record 2.

//2 is entered and transmitted.

ODESY replies:

```
001 0002 REC1      [ ] VER
STK NO   [    ]   ST CODE [05]
QTY   [    ]       VALUE [    ]
DATE [070781]
```

The ST CODE and DATE fields are filled, since they are to be verified visually.

Each record is rekeyed and transmitted. As each record is verified as correct, the next logical record is automatically displayed for verification.

When verification is complete, the batch is closed.

/CLO is entered and transmitted.

ODESY replies: THE BATCH IS NOW CLOSED

SCHEDULING A BATCH FOR EXTRACTION

After data entry and verification are complete, a batch is ready to be scheduled for extraction.

/SCH 1 is entered and transmitted.

ODESY replies: NOW SCHEDULED FOR EXTRACTION

LOGGING OUT

During this ODESY session, a batch was entered, verified, corrected, and scheduled. The work session is ended by logging out.

/BYE is entered and transmitted.

ODESY replies: YOU ARE LOGGED OUT

APPENDIX A. EDIT PROGRAM COMMANDS

This section explains how and when to use the Edit Program commands. These are the commands that are used to enter, verify, and schedule data. Also included are control commands which allow you to manage system operation to a small degree.

Certain commands can be restricted to supervisors or can be excluded from use altogether. Check with a supervisor to determine which commands are allowed.

Commands are entered from the HOME position. All commands must be preceded by a slash (/); however, it is only necessary to enter the first three letters of the command for ODESYS to recognize it.

The commands in this section are presented in diagrams composed of words and arrows. These diagrams tell you exactly what to enter to perform a task. You use the diagrams by tracing any path along the direction of the arrows and entering the words and symbols exactly as they appear along the path. Required words are shown in capital letters. Words or numbers that you supply are enclosed by angle brackets (< >). Two examples are included below to illustrate how to use these diagrams.

Example:

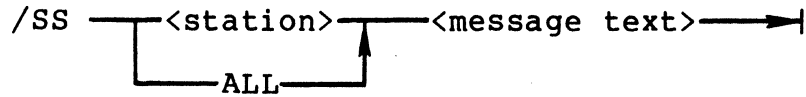
/DELETE————<record>————→|

To delete record number three, you enter: /DEL 3.

You must enter /DEL as it is a required word. Since <record> is enclosed by angle brackets, you supply the number of the record you want to delete.

Even though some commands have more than one form, they are still used in the same way as commands with one arrangement.

Example:



This command can be used for two purposes:

- a. To send a message to a specific station:

/SS 2 There will be a staff meeting at 2 p.m.

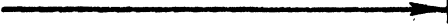
- b. To send a message to all stations.

/SS ALL There will be a department meeting at 2 p.m.

Each command is explained separately on the following pages. When a command has more than one form, each option is explained, as well as the exact way it should be entered.

ACCEPT

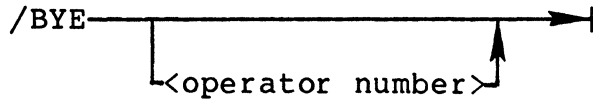
The ACCEPT command forces a record containing errors to be added to a batch.

/ACCEPT 

This command is used when a record contains errors which cannot be immediately corrected. It allows incorrect data to be added to the batch for correction at a later time. It can be used following an ENTER, INSERT, MODIFY, or VERIFY command.

BYE

The BYE command is used to log an operator out of the system.



The two options of the BYE command are:

1. /BYE

Option 1 logs an operator out. If a batch is open, or if the operator is in Inquiry mode, a CLOSE command must be used before logging out.

2. /BYE <operator number>

Option 2 is used only when it is necessary to log out from a station other than the one the operator is logged in to. It is used when a station is disabled so that an operator can log out from the disabled station and log in to an active station.

CLOSE

The CLOSE command is used to close a batch or to terminate Inquiry mode.

/CLOSE—————→

This command ends a work session and closes the current open batch. It is also used to terminate Inquiry mode.

If a batch was open for verification, and there are unverified records, then the batch is closed and a warning message is sent indicating the first unverified record.

CONTROL

The CONTROL command assigns control status to a station so that the TERMINATE and ZIP commands can be used at that station.

/CONTROL—<station number>—→|

This command is used to set up control stations. The CONTROL command can only be used at an existing control station. The ODT (operator display terminal) is always a control station. If a temporary control station is required, however, the CONTROL command must be used. The station retains control status only for the duration of the current data entry session.

DELETE

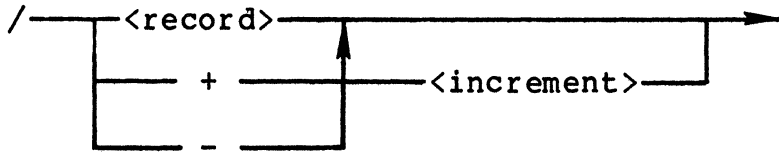
The DELETE command is used to delete a record from a batch.

/DELETE————<record>————→|

When a record is deleted, the record numbers of the following records are decreased by one. For example, if record 10 is deleted from a batch containing 15 records, then records 11 to 15 are renumbered as records 10 to 14. The DELETE command can be used when entering or verifying data.

DISPLAY

The DISPLAY command is used to display selected records in a batch.



This command is used to display a specific record or to page through a batch of records. Data cannot be changed when using the DISPLAY command; it is used only for inspecting records. This command can be used when entering or verifying data, or used only to display records.

The two options of the DISPLAY command are:

1. /<record>

Option 1 is used to display a specific record. To display the next record, use a blank transmission.

2. /+<increment> or /-<increment>

Option 2 is used to skip forward or backward through a batch using the increment specified. An increment of one is assumed if no increment is specified.

To continue skipping forward or backward through a batch by the increment specified, use a blank transmission.

ENTER

The ENTER command is used to enter a record of data into a batch.

//<format>—————→

This command is used to begin entering data. It can be used only after a batch has been opened for data entry. The format needed for data entry is requested; it must be a part of the group of formats specified when the batch was opened.

ODESY responds to this command by displaying the specified format. A record entered using this command is added to the end of the batch.

HELLO

The HELLO command is used to log an operator in to the system.

/HELLO——<operator number>——<password>——|

This command is used to begin an ODESYS session at this station. An operator is not allowed to open batches until properly logged in.

The operator number and password specified must refer to a valid operator.

If the system closedown procedure has started (see TERMINATE command), no operator is allowed to log in.

INQUIRY

The INQUIRY command is used to perform inquiry or real-time updating through an ODESYS user program.

//<format>—————▶

This command is used to retrieve information from an ODESYS user program (inquiry) or to send data to an ODESYS user program (real-time updating). Batches are not used in Inquiry mode.

The format name indicates the inquiry format to be used. The format must be contained in the group specified in the OPEN command. For further information about the ODESYS inquiry feature, refer to the B 1000 Series On-Line Data Entry System (ODESYS) Installation Manual, form 1129384.

INSERT

The `INSERT` command is used to insert a record at a specific position in a batch.

`/INSERT`——<record>——<format>——→|

This command is used to add a record when records must appear in sequential order in a batch. The `ENTER` command can be used when the order of records in a batch is not important, since it always adds records to the end of a batch.

The new record is inserted after the specified record number. The record numbers of the following batch records are increased by one. For example, if a record is inserted after record 10 in a batch containing 15 records, records 11 to 15 are renumbered as records 12 to 16, and the new record is record 11.

To insert a new first record, specify zero for the record number. The `INSERT` command can be used during data entry or verification.

MODIFY

The MODIFY command is used to make changes to a batch record.

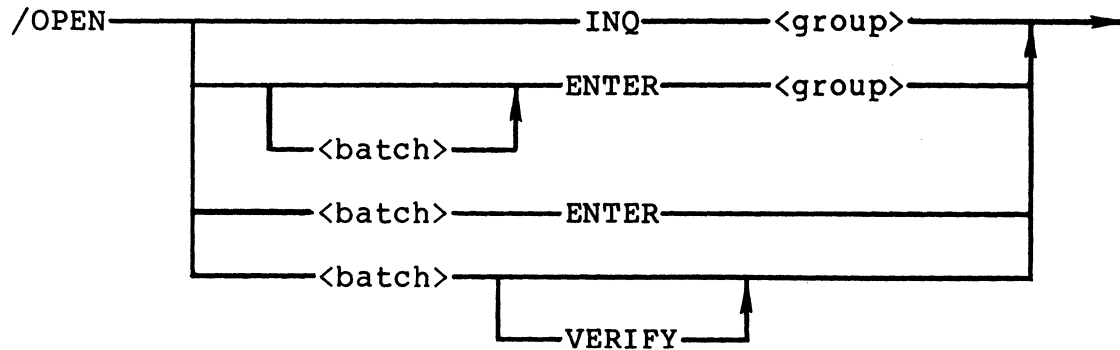
//<record>—————▶

The MODIFY command is used to change the data in a specific record. It can only be used during data entry.

The data record specified is retrieved from the batch and displayed on the screen. Any of the data displayed can be changed.

OPEN

The OPEN command is used to open a batch or to start Inquiry mode.



This command opens a batch for data entry, verification, or display. It is also used to begin Inquiry mode. There is no batch used for Inquiry; data is obtained from or sent to a user program.

The five options of the OPEN command are:

1. /OPEN INQ <group>

Option 1 is used to open a batch for work with a user program. Instead of data being stored in and retrieved from a batch, it is obtained from or sent to a user program. This command is used for displaying information in a master file, or for real-time updating.

2. /OPEN <batch> ENTER <group>

Option 2 is used to open a new batch for data entry. When a new batch is opened, the group name must be specified, but an operator can choose to supply a batch number, or omit it and have ODESYS assign a batch number. When a batch is opened for data entry, the ENTER, MODIFY, INSERT, DELETE, DISPLAY, and ACCEPT commands can be used.

3. /OPEN <batch> ENTER

Option 3 is used to open an existing batch for additional input. When an existing batch is opened, the group name can be omitted.

4. /OPEN <batch>

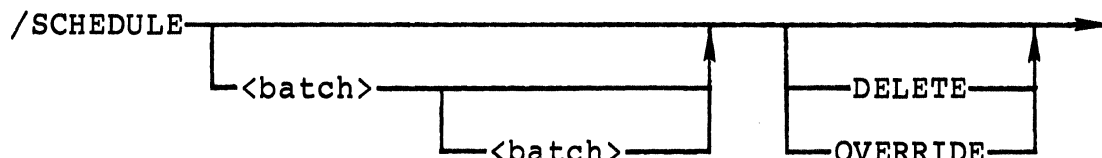
Option 4 is used to open a batch for display. Only the DISPLAY command can be used when a batch is opened for display.

5. /OPEN <batch> VERIFY

Option 5 is used to open a batch for verification or display. If the key word VERIFY is omitted, the batch is opened for display, and only the DISPLAY command can be used. When a batch is opened for verification, the VERIFY, INSERT, DELETE, DISPLAY, and ACCEPT commands can be used.

SCHEDULE

The SCHEDULE command is used to schedule a batch (or batches) for extraction or deletion. The batch is extracted or deleted during the next run of the Extraction Program.



There are two optional specifications that can be used with the SCHEDULE command: `VERRIDE` and `DELETE`. If both are omitted, batch total comparisons are performed, and the batch is not scheduled if errors are found. If `VERRIDE` is specified, the batch total comparison errors are ignored. When `DELETE` is specified, the batch is scheduled for deletion and is physically removed during the next run of the Extraction Program.

The three options of the SCHEDULE command are:

1. `/SCHEDULE`

Option 1 is used to schedule an open batch. Because the batch is open, data can be examined before it is scheduled. Scheduling a batch does not close it. The batch must be closed before new work can begin.

2. `/SCHEDULE <batch>`

Option 2 is used to schedule a specific batch. It is not necessary to have a batch open, because the batch to be scheduled is specified in the command. Batch data cannot be inspected before it is scheduled when using this option. A batch is not scheduled if it is open at another station.

3. `/SCHEDULE <batch> <batch>`

Option 3 is used to schedule a range of batches, such as `<batch> thru <batch>`. It is not necessary to have the batches open, because the batches to be scheduled are specified in the command. Batch data cannot be examined before it is scheduled when using this option. The batches are not scheduled if any of the specified batches are open at another station.

When Option 3 is used, a scheduled report is displayed. The list of batches scheduled consists of a table of entries in the following form:

xxx yz

where xxx is the batch number, y is the schedule result, and z is the delete result. There is an entry in the table for each allocated batch in the range <batch> thru <batch>, and y and z assume the following values:

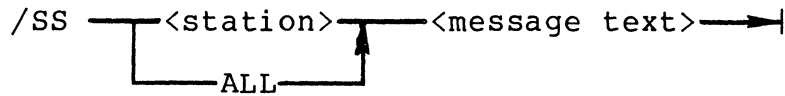
- B - Batch total comparison error.
- D - Scheduled for deletion.
- I - In use at another station.
- E - Batch has been extracted.
- S - Scheduled for extraction.
- Blank - Not scheduled.

If batches are scheduled for extraction, y is S, B, I, or E, and z is a blank space or D. y indicates whether the batch was scheduled, and z indicates the current delete status. In this case, a y indicator of E means that the batch has already been extracted, but will be rescheduled for extraction at this time.

If batches are being scheduled for deletion, z is D or I, and y is a blank space, S, or E. z indicates whether the batch was scheduled, and y indicates the current extraction status.

SS

The SS (send to station) command is used to send a message to another station or to the ODT.



This command can be used to send a message to any ODESY station. The message is cut off if it exceeds 145 characters.

There are two arrangements of this command:

1. `/SS <station> <message text>`

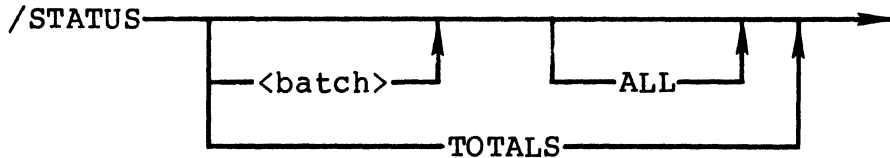
Option 1 is used to send a message to a specific ODESY station. The ODT is regarded as station number zero.

2. `/SS ALL <message text>`

Option 2 is used to send a message to all active ODESY stations.

STATUS

The function of the STATUS command is to display the status of a station or batch, or to display the batch totals of the current batch.



This command is used to obtain status information from ODESYS. The STATUS command can be used at any time.

There are three arrangements of the STATUS command:

1. STATUS ALL

Option 1 gives a station status report. If ALL is omitted, the report is given for this station only. If ALL is included, ODESYS sends status reports for all stations, in station number order. The first status report is sent in response to the STATUS command, and subsequent pages can be requested by entering and transmitting a single blank character.

The information contained in a station status report is listed below. Possible values are included in parentheses.

Station status report information:

STATION NUMBER AND OPERATOR (station number)
(operator number)
CURRENT & LAST BATCH (batch number) (batch number)
CURRENT RECORD & MODE (record number) (ENTER or VERIFY)
CURRENT GROUP & FORMAT (group name) (format name)
LOGGED IN SINCE (time - 24-hour clock)

2. /STATUS <batch> ALL

Option 2 gives a batch status report. If ALL is omitted, the report is for the batch specified; if ALL is included, ODESYS sends status reports for all allocated batches, beginning with the batch specified. Subsequent pages can be displayed by entering and transmitting a single blank character.

The information contained in a batch status report is listed below. Possible values are included in parentheses.

Batch status report information:

```

BATCH NUMBER AND RECS (batch number)
                        (total number of records)
IN USE AT STATION (LSN)
ENTRY STATUS (IN PROGR or COMPLETED)
VERIFICATION STATUS (blank, IN PROGR, COMPLETE)
DELETE STATUS (blank, DELETED)
EXTRACTION STATUS (blank, SCHEDULED, DONE)
OPENED & SCHEDULED BY (operator number)
                        (operator/supervisor number)

```

3. /STATUS TOTALS

Option 3 gives the status of the five batch total registers for the current batch. These are the batch totals calculated by ODESYS. If no batch is open, the registers are set to zero.

Batch totals status information (for current batch):

```

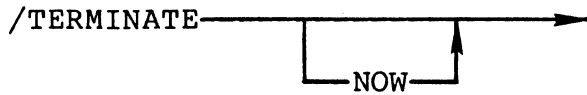
1  +00000000000000000
2  +00000000000000000
3  +00000000000000000
4  +00000000000000000
5  +0000000000000000

```

The signed value is always 15 digits preceded by a sign (zero-filled and right justified).

TERMINATE

The function of the TERMINATE command is to shut down ODESYS.



This command is used to start the ODESYS closedown procedure. Only a station with control status can use the TERMINATE command.

The two options of the TERMINATE command are:

1. /TERMINATE

Option 1 is used to give a warning several minutes before actual shutdown. A warning message, CLOSING DOWN-END YOUR WORK NOW, is displayed at all active stations. Operators are prevented from logging in to begin a new session.

2. /TERMINATE NOW

Option 2 begins system closedown. The message CLOSE FORCED-YOU ARE LOGGED OUT appears at all active stations. Any open batches are closed, all active operators are automatically logged out, and the Edit Program is brought to EOJ (end-of-job).

VERIFY

The VERIFY command is used to verify a batch record, either by rekeying the record, or by performing a visual check.

//<record>—————→|

This command is used to begin the verification of data. It can only be used when a batch is open for verification.

The record specified is retrieved from the batch and displayed. Some fields designated as No Verify may be filled when the record is displayed. Data in these fields cannot be changed; the cursor skips over a No Verify field. Other fields may be filled when the record is displayed so that they can be verified visually. Data in these fields can be changed, if necessary. Data is not displayed in fields that must be rekeyed.

When the verified data is transmitted to ODESYS, it is compared character by character against the original record entered. If there are no differences, the data is returned to the batch and marked as verified.

WRU

The WRU (who are you?) command is used to provide station and system identification.

/WRU 

This command is used to obtain the ODESYS greetings message, indicating the version of ODESYS that is running, and identifying the station by station number and name.

ZIP

The ZIP command is used to send control instructions to the MCP (master control program).

/ZIP—<MCP-control-instruction>—▶|

This command is used to execute other programs from a remote ODESY station. Only a station with control status may use the ZIP command. The MCP control instruction cannot exceed 256 characters.

The MCP control instructions can be zipped, but there are restrictions (refer to the B1000 Systems System Operation Guide, form 1108982).

APPENDIX B. ERROR AND INFORMATION MESSAGES

This appendix contains a list of the Edit Program's error and information messages. In each case, the message number is listed, followed by the standard text, the cause of the message, any action necessary, and the maximum number of characters that can be altered by the user. Messages that appear at the terminal and at the ODT (operator display terminal) are included. Whenever possible, messages are shown exactly as they appear at the terminal and the ODT.

The text of these messages can be modified by the user. A supervisor can provide a list of changed messages, if necessary.

NUMBER	MESSAGE	EXPLANATION
1	SECURITY LEVEL ERROR	The operator is not allowed to use the format specified. Ensure that the operator number was entered correctly. Contact a supervisor, if necessary. Length 31.
2	CLOSING DOWN-END YOUR WORK NOW	This message is a warning that the system is shutting down. When this message appears, no operator can log in. Operators already logged in and working should finish the batch they are working on and log out. Length 31.
3	CLOSE FORCED-YOU ARE LOGGED OUT	The Edit Program has stopped. All operators still logged in have been automatically logged out. If a work session is interrupted, the operator should note how many records have been processed in this batch. Length 31.
4	SYSTEM ERROR-LAST COMMAND LOST	The last command keyed in cannot be executed because of an internal processing fault. Rekey the command. Length 31.
5	THE BATCH IS NOW CLOSED	The CLOSE command has been used successfully. Length 31.

- | | | |
|----|------------------------------|--|
| 6 | THE RECORD IS ACCEPTED | Either the ACCEPT command has been used successfully, or the data entered has been accepted by the Edit Program as correct. Length 31. |
| 7 | NOW SCHEDULED FOR EXTRACTION | The SCHEDULE command has been used successfully, and the batch is scheduled for extraction. Length 31. |
| 8 | RECOVERY STARTED | It was necessary to execute the the recovery system before restarting the program. This message appears at the ODT. Length 31. |
| 9 | A BATCH IS ALREADY OPEN | The OPEN command has been entered at a station where a batch is already open. This message appears if a batch is open and an attempt is made to open another batch. Finish processing the batch that is already open. Close that batch and then open the next batch needed. Length 31. |
| 10 | YOU ARE NOT ENTERING DATA | <p>An attempt is being made to transmit data without first opening a batch for data entry. This could happen if an operator opened a batch only to display records and then tried to display a format for data entry.</p> <p>This message also appears when the ACCEPT command is used during verification. To enter data, use the CLOSE command, followed by the OPEN ENTER command. Length 31.</p> |
| 11 | AN OPERATOR IS LOGGED IN | A HELLO command has been entered at a station where an operator is already logged in. Log in at another station or wait until the current operator logs out at this station. Length 31. |

- | | | |
|----|--------------------------------|--|
| 12 | NO OPERATOR IS LOGGED
IN | An operator is attempting to use a station without first having logged in. Follow the log in procedure to begin a work session. Length 31. |
| 13 | YOU ARE LOGGED IN
ELSEWHERE | <p>An operator is attempting to log in at one station without having logged out at another station. An operator cannot be logged in to two stations at the same time. Use one of the following methods for logging in:</p> <p>Follow the log out procedure at the first station and the log in procedure at the second station. (Refer to Section 2).</p> <p>Alternatively, use the BYE command with the operator number at the station where the message appears, followed by the HELLO command. Length 31.</p> |
| 14 | YOUR NAME ISN'T ON
FILE | A password or operator number which is not defined in the system file is being used. Ensure that the password is correct and that the number is exactly as it appears in the operator listing. For security reasons, no passwords appear in the operator listing. Length 31. |
| 15 | I CAN'T LOAD THAT
FORMAT | The format is too large to be stored in the Edit Program's internal tables. Contact a supervisor. Length 31. |
| 16 | THAT FORMAT DOESN'T
EXIST | The format requested is not stored in the Formats file. Ensure that the correct format name has been requested. Length 31. |

17	THAT BATCH IS IN USE ELSEWHERE	An OPEN command has been used to request a batch that is open at another station. Wait until the batch has been closed at the other station and then rekey the command. Length 31.
18	NO BATCH IS OPEN	An attempt is being made to manipulate data without having opened a batch. Length 31.
19	THE BATCH WILL BE DELETED	The SCHEDULE DELETE command has been used successfully. The batch will be deleted the next time the Extraction Program is run. Length 31.
20	THAT COMMAND IS RESTRICTED	An operator is attempting to use a command which is restricted to supervisors. Check with a supervisor. Length 31.
21	THE RECORD IS DELETED	The DELETE command has been used successfully. Length 31.
22	THE RECORD IS INSERTED	The INSERT command has been used successfully. Length 31.
23	THE RECORD DOES NOT EXIST	The record requested is not in the current open batch for this station. The record may be in another batch, or it may not exist. Ensure that the record number was entered correctly. Check whether the record was deleted. Length 31.
24	YOU ARE LOGGED IN	A HELLO command has been used successfully. Continue with the work session. Length 31.
25	YOU ARE LOGGED OUT	A BYE command has been used successfully. Length 31.
26	I AM NOT EXPECTING DATA	An operator is attempting to key in data when there is no format displayed. Key in the ENTER command to display the required format. Length 31.

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|----|-----------------------------------|---|
| 27 | ODESY IS RESTARTED | Recovery is complete, and ODESY is running again. This message appears only at the ODT. (Refer to message 8.) Length 31. |
| 28 | LAST BATCH AND RECORD | Recovery occurred when ODESY was restarted. This message gives the last batch and record processed at this station. Length 21. |
| 29 | BATCH OPENED | The OPEN command has been used successfully. The batch specified is open and ready for processing. Length 31. |
| 30 | I DON'T RECOGNIZE THAT
COMMAND | A command has been keyed in incorrectly. Key in the command exactly as shown in Appendix A. Length 31. |
| 31 | INVALID STATION NUMBER | The LSN specified in an SS command is greater than the maximum number of stations. Check the number of the station required and check whether the number for maximum stations in the system file was altered. Also check the number of the station required. Length 31. |
| 32 | WARNING SENT TO
STATIONS | The TERMINATE command has been used at the ODT. This command is used to close down the system. This message is also displayed at the ODT. No action is required. Length 31. |
| 33 | THE SYSTEM IS CLOSING
DOWN | An operator is attempting to log in to the system after the shutdown cycle has been started. Wait until the system is run again. Length 31. |
| 34 | MADE CONTROL STATION | A CONTROL command has been used successfully. The station specified as a control station is now able to perform control functions. Length 31. |

- | | | |
|----|--------------------------------|---|
| 35 | INVALID SYNTAX | The user supplied values for a command are not correct. Rekey the correct values for this command. Length 31. |
| 36 | THAT GROUP DOES NOT EXIST | An OPEN command specifying a group name that is not in the Formats file has been entered. Ensure that the group name has been keyed in correctly. Also check whether this group has been deleted from the Formats file. Length 31. |
| 37 | THERE ARE NO FREE BATCHES | An OPEN command has been used with no batch number specified. ODESYS is unable to assign a batch number since all batches are allocated. Length 31. |
| 38 | THE DESTINATION IS NOT ON-LINE | An SS command has been used, but the receiving station is not yet ready. Use the command again after waiting a few moments. Length 31. |
| 39 | BATCH TOTAL COMPARISON ERROR | A SCHEDULE command has been used, but the batch totals entered by the operator do not match those calculated by ODESYS. Either correct the operator-entered batch totals, or use the OVERRIDE option to force scheduling of the batch. Length 31. |

Messages 40 thru 46 appear when the STATUS command is used for a batch.

- | | | |
|----|-----------------------|---|
| 40 | BATCH NUMBER AND RECS | This message is sent as the first line of a batch status report. It shows the batch number and the total number of records in this batch. Only the first 21 characters of this message can be altered. Length 21. |
|----|-----------------------|---|

41	IN USE AT STATION		This is the second line of the batch status report. It shows the logical station number (LSN) of the station currently using the batch (if it is being used). Only the first 29 characters of this message can be altered. Length 29.
42	ENTRY	STATUS	This is the first part of the third line of the batch status report. Message 58 forms the second half of the line and shows the entry status as IN PROGR or COMPLETE. Length 21.
43	VERIFICATION	STATUS	This is the first part of the fourth line of the batch status report. The second part of the line shows the verification status as blank (not verified), IN PROGR, or COMPLETE (see message 58). Length 21.
44	DELETE	STATUS	This is the first part of the fifth line of the batch status report. The second part of the line is either blank, indicating the batch is still in the system, or shows DELETED. Message 58 forms the second part of the line. Length 21.
45	EXTRACTION	STATUS	This is the first part of the sixth line of the batch status report. The second part of the line is either blank, indicating the batch has not been scheduled or extracted, or it shows SCHEDULED or DONE. Message 59 forms the second part of the line. Length 21.
46	OPENED & SCHEDULED BY		This is the first part of the seventh line of the batch status report. This line is completed by the number of the operator or supervisor who scheduled the batch. Length 27.

Messages 47 thru 51 appear when the STATUS command is used for a station.

- 47 STATION NUMBER & OPERATOR This is the first part of the first line of a station status report. The second part of the line includes the name of the station (LSN) and the number of the operator logged in at this station, if any. Length 26.
- 48 CURRENT & LAST BATCH This is the first part of the second line of the station status report. Length 24.
- 49 CURRENT RECORD & MODE This is the first part of the third line of the station status report. The second part of the line is formed by the number of the record currently being processed and the mode for the batch in use (ENTER, VERIFY). Length 22.
- 50 CURRENT GROUP & FORMAT This is the first part of the fourth line of the station status report. The second part of the line is formed by the names of the group and format currently in use at this station. Length 23.
- 51 LOGGED IN SINCE This is the first part of the fifth line of the station status report. The second part of the line contains the log-in time for the operator at this station (24-hour clock). Length 26.
- 52 THE BATCH DOES NOT EXIST Either an OPEN or a STATUS command has been used specifying an invalid batch number. Ensure that the correct batch number was entered on the input form and that it was entered correctly. Length 31.
- 53 DONE. An SS command has been used successfully. Length 31.

- 54 I WAS LOOKING FOR A NUMBER
A command which should have been followed by a number was followed by a name or by blanks. Check the form of the command and rekey it correctly, if necessary. Length 31.
- 55 SHUTDOWN FORCED. TANK FILE FULL
There is no room available in the Tank file to store data. Delete unwanted batches. Length 31.
- 56 YOU ARE IN DISPLAY MODE
A VERIFY, MODIFY, INSERT, or DELETE command has been entered when a batch has been opened only for display. Open the batch for the activity to be performed. Length 31.
- 57 BATCH CLOSED - NOT ALL VERIFIED
The CLOSE command was used to close a verified batch, but there are still unverified records. This message is only a warning; no action is required. Length 31.
- 58 IN PROGR
COMPLETED DELETED
This message is used to form the second part of the line in messages 42, 43, and 44. It indicates that a particular mode is in progress or completed, or that a batch is scheduled for deletion. Length 10.
- 59 SCHEDULED DONE
This message forms the second part of the line in message 45. It indicates that extraction is either scheduled or complete. Length 10.
- 60
This message is no longer used.
- 61 NOT ENOUGH RECOVERY SPACE
The Edit Program has determined that the recovery record is not large enough to hold all the information necessary for the requested number of stations. Either reduce the number of stations or change the value of the Record Size option for the Tank file. Length 31.

62	FORMAT TOO LARGE TO DISPLAY	An attempt is being made to access a format which is too large to fit on the screen of the terminal being used. The minimum screen size for the format can be determined by printing the format with FORMAIN. Then either make the format smaller or access it on a terminal having the same screen size. Length 31.
63	EOF ON REMOTE FILE	The network controller may have been DSed (discontinued) while the Edit Program was running. Restart the Edit Program. Length 31.
64	YOU CANNOT CHANGE GROUP	An attempt has been made to open an existing batch specifying a group name different from the one used to originally enter data. Check both the group name and batch number. Length 31.
65	INQUIRY PROGRAM IS NOT RUNNING	A user program required by an inquiry format is not running. Repeat the command. If this message appears again, contact a supervisor. Length 31.
66	INVALID INQUIRY KEY	An invalid key, or no key, has been specified when using an inquiry format. Contact a supervisor. Length 31.
67	INVALID INQUIRY FORMAT	The user program specified cannot handle the format. Contact a supervisor. Length 31.
68	INVALID INQUIRY REPLY	The user program gave an invalid reply. Contact a supervisor. Length 31.
69	FIRST UNVERIFIED RECORD	A verified batch was closed, but not all records were verified. Message 57 is also displayed. Length 25.

- | | | |
|----|------------------------------------|--|
| 70 | YOU ARE IN INQUIRY
MODE | Either an OPEN INQUIRY command has been received, or a command that is invalid for Inquiry mode (i.e., DISPLAY, VERIFY, INSERT, DELETE) has been received. If an OPEN INQUIRY command was sent, no action is necessary. If an invalid command was sent, contact a supervisor. Length 31. |
| 71 | NOT BUSY | This message follows a STATUS ALL or STATUS <batch number> ALL command when there are no more status reports to send. Length 31. |
| 72 | SYSTEM & TANK FILES
DON'T MATCH | The last access date/time of the two files is different. Message 75 is also sent. Load the most recent backup copies of the two files. Length 31. |
| 73 | LINKAGE ERRORS IN TANK
FILE | The Tank file has been corrupted. Messages 74 and 75 are also sent. Execute the Dump Program, then load the most recent backup copies of the files. Length 31. |
| 74 | PLEASE EXECUTE
ODESY/DUMP THEN | See message 73. Length 31. |
| 75 | PLEASE LOAD BACKUP
FILES | See messages 72 and 73. Length 31. |
| 76 | INQUIRY PROGRAM TABLE
FULL | An inquiry format has been requested, but there is no room for a new user program in the table. Contact a supervisor. Length 31. |
| 77 | WARNING - TANK FILE
ALMOST FULL | The number of records being used in the Tank file exceeds the percentage specified in the system configuration parameters. Delete any unwanted batches and continue with data entry. Consider increasing the size of the Tank file. Length 31. |

78 WARNING - EXTRACT
STILL ON-LINE

An attempt has been made to terminate the Edit Program while the on-line Extraction Program is running. Wait until the Extraction Program goes to EOJ (end-of-job), then terminate the Edit Program. (If the Extraction Program is waiting DS or DP, it must be DSed (discontinued) or DPed (dumped) before the Edit Program can be brought to EOJ). Length 31.

79 BATCH ALREADY
EXTRACTED

This batch has already been extracted; however, it will be scheduled for re-extraction at this time. If the batch needs to be extracted again, no action is necessary. If the batch does not need to be re-extracted, opening the batch will remove it from the extraction schedule. Length 31.

APPENDIX C. GLOSSARY

APPLICATION PROGRAM

A program that ultimately processes the data you enter. For example, you may enter a batch of payroll data. The Extraction Program then converts that data to a format suitable for processing by an application program. The application program then takes the converted payroll data you entered and produces pay checks.

AUDIT CHECKS

The checks that are applied to data entered from a station. These checks help ensure the data's correctness.

BATCH

A collection of related records grouped together for processing.

BATCH HEADER RECORD

If the batch totalling feature is used, the batch header record is the first record in a batch. It contains identifying information and control totals.

BATCH TOTALS

Control totals entered by the operator and generated by ODESYS which must match. Batch totals help check the accuracy of numeric fields in the records of a batch.

CATHODE RAY TUBE (CRT)

The part of a terminal that displays information being sent to or received from the computer. A CRT is also referred to as a terminal screen.

CHARACTER

Any number, letter, or special symbol on the terminal keyboard.

COMMAND

A key word that tells the computer what activity to perform.

CONTROL INFORMATION

Control information is displayed on the top line of a screen format. It consists of the batch number, the current record number, the format name, the cursor parking area, and either the name of the next format or of the current action. There is also a space between the format name and the cursor parking area which is used to display an error count if there are errors in the data entered.

CONTROL KEYS

The keys on a terminal keyboard that allow you to select the mode of operation of a terminal.

CROSSFOOTING

A feature which ensures that numbers have been entered and totalled correctly within a record.

CURSOR

A small rectangular image of light on the terminal screen which indicates the position of the next character to be entered.

CURSOR PARKING AREA

An entry field on a screen format that the cursor automatically enters when the last field on the screen format is filled.

DELETION

The process that removes a batch permanently. Once a batch is deleted, it cannot be retrieved. A batch is scheduled for deletion through the Edit Program. It is not actually removed until the Extraction Program is run.

EDIT PROGRAM

The ODESYS program that controls data entry, verification, and scheduling for extraction or deletion. None of these activities can be performed unless this program is running.

ENTRY FIELD

A space on a screen format, enclosed by forms delimiters, where information can be entered and/or changed.

EXTRACTION

The process that converts batches from the form convenient for the Edit Program to the form expected by the application program. A batch is scheduled for extraction through the Edit

Program, but is not actually extracted until the Extraction Program is run.

EXTRACTION PROGRAM

The ODESYS program that controls batch extraction and deletion. Batches are not extracted or deleted until the Extraction Program is run.

FIELD

A specified area on a screen format used to contain a particular type of data.

FOLLOWING FORMAT

A format which automatically follows the one displayed upon the successful entry of data.

FORMAT

A collection of fields used for entering data.

FORMS DELIMITERS

The characters which define an entry field. Forms delimiters are usually square brackets ([]), braces ({ }), or triangles (> <).

FORMS MODE

The mode of operation used during data entry. The cursor does not appear outside of field delimiters during Forms mode.

FUNCTION KEYS

The keys on a terminal keyboard that control cursor movement.

GROUP

A collection of formats providing input to a single application program, i.e., payroll, inventory, accounts receivable, etc.

HOME

The upper, left-most character position on the terminal screen.

INDICATOR LIGHTS

The lights located above the control keys on a terminal keyboard that indicate the current mode of the terminal.

NO VERIFY

A verification option specified by the format designer. Information in a No Verify field is displayed on the screen format during verification, but cannot be changed.

NONENTRY FIELD

A specific area on a screen format that contains system-supplied information such as titles and field headings. Information in nonentry fields cannot be changed. Nonentry fields are not bounded by forms delimiters.

OPERATOR DISPLAY TERMINAL (ODT)

The terminal used to operate and supervise the computer system. Using the ODT, an operator can load programs, monitor processing functions, etc.

PROGRAM

A set of instructions that tells the computer what to do.

RECORD

A collection of related information treated as a unit. A purchase order, time card, and invoice are all examples of a record.

STATION

A device used to send information to and receive information from the computer. A station is also referred to as a terminal.

TANK FILE

A work file used by the Edit Program to hold all batches until they are scheduled.

TERMINAL

A device used to communicate with a computer. A terminal consists of a cathode ray tube (CRT) and a keyboard. A terminal is often referred to as a station.

VERIFICATION

The process used to ensure that entered data is correct. Verification is controlled by the Edit Program. Data can be verified visually or by rekeying. A format designer may also use the No Verify option where information is displayed during verification, but cannot be changed.

EDIT PROGRAM COMMANDS REFERENCE CARD

/ACCEPT—————▶

/BYE—————▶
 | |
 |<operator number>|

/CLOSE—————▶

/CONTROL—————<station number>—————▶

/DELETE—————<record>—————▶

DISPLAY

/—————<record>—————▶
| | |
| + |<increment>—————▶
| - |

ENTER

//<format>—————▶

/HELLO—————<operator number>—————<password>—————▶

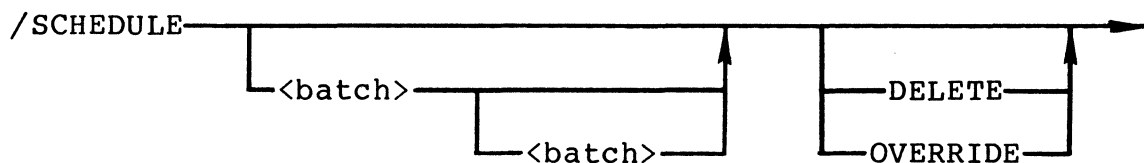
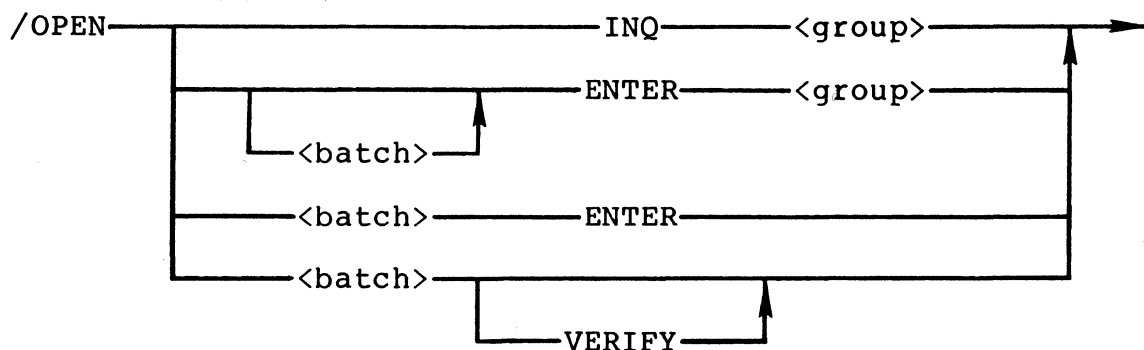
INQUIRY

//<format>—————▶

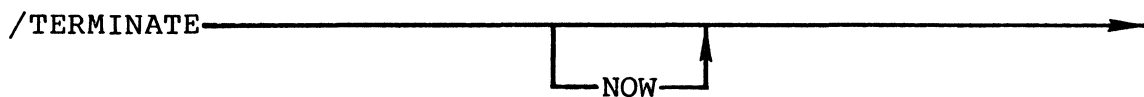
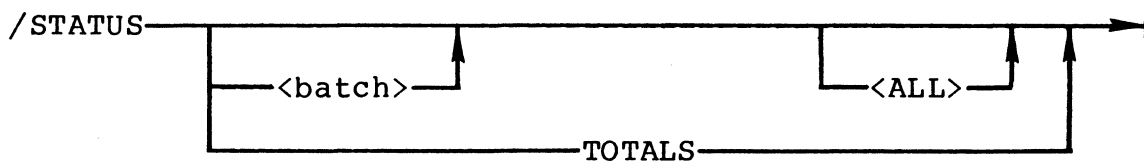
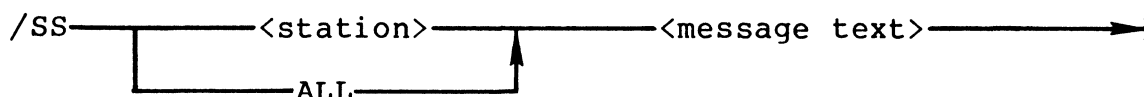
/INSERT—————<record>—————<format>—————▶

MODIFY

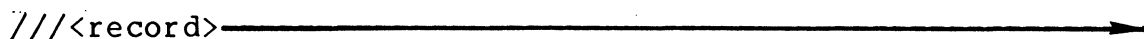
//<record>—————▶



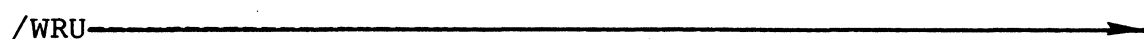
SS (Send to Station)



VERIFY



WRU (Who Are You?)



DISPLAY	
To open a batch for display	/OPE <batch> DIS
To display a record	/<record number>
To move forward	/+<number of records>
To continue forward	blank transmission
To move backward	/-<number of records>
To continue backward	blank transmission
To close a batch	/CLO

OBTAINING STATION AND BATCH STATUS REPORTS	
To display the status of the requesting station	/STA
To display the status of all stations	/STA ALL
To display subsequent pages of the station status report	blank transmission
To display the status of a specific batch	/STA <batch>
To display the status of all batches	/STA <batch> ALL
To display subsequent pages of the batch status report	blank transmission
To display batch totals of current open batch	/STA TOT

GENERAL	
To log in	/HEL <operator number> <password>
To display your station number, time of day, etc.	/WRU
To send a message to another ODESYS station	/SS <station number> message
To log out	/BYE

DATA ENTRY	
To open a new batch	/OPE ENT <group>
To re-open a batch	/OPE <batch> ENT <group>
To enter data at first available record	//<format>
To close an entered batch	/CLO

VERIFICATION	
To open a batch for verification	/OPE <batch> VER
To request a record for verification	//<record number>
To close a verified batch	/CLO

DATA ENTRY OR VERIFICATION	
To force entry of a record	/ACC
To display a record	/<<record number>
To move forward	/+<number of records
To continue forward	blank transmission
To move backward	/-<number of records>
To continue backward	blank transmission
To modify a record	//<record number>
To add a record	/INS <record number> <format>
To remove a record	/DEL <record number>

SCHEDULING	
To schedule an open batch	/SCH
To schedule a specific batch	/SCH <batch>
To schedule a range of batches	/SCH <batch> <batch>
	Use the DEL option to schedule for deletion Use the OVE option to ignore batch total errors

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2" BINDER

1½" BINDER

1" BINDER

B 1000 Series ODESY

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